

HEMI-SPHERICAL GRAIN SILICON ENHANCEMENT

ABSTRACT

Hemi-spherical grain silicon enhancement with epitaxial silicon for semiconductor assemblies is described. Epitaxial silicon is used to enhance hemi-spherical grain silicon on semiconductor structures, such as storage node capacitor plates for a semiconductor assembly. Methods described include forming an optional amorphous silicon layer as a base to form hemi-spherical grain silicon thereon. The rough texture of the hemi-spherical grain silicon enhances the overall textured surface of the capacitor plate by the addition of epitaxial silicon.